

REMARKS

Claims 1-11, 17, 18, and 20-35 are pending, with claims 1-4 being independent. Claims 1-4 have been amended and claims 28-35 have been added. Support for the amendments can be found in the specification, at least at page 2, lines 21-24, and support for the new claims can be found in the specification, at least at page 10, lines 5-9. No new matter has been added.

Claims 1-4, 9-11, and 20-27 have been rejected as being unpatentable over U.S. Patent No. 4,646,424 (Parks) in view of U.S. Patent No. 6,009,888 (Ye).

Applicant requests withdrawal of the rejection of claims 1 and 3 because Parks fails to describe or suggest irradiating a resist pattern with light after etching a metal film, as recited in claims 1 and 3, and because one of ordinary skill in the art would not have been motivated to modify Parks in the manner set forth in the rejection.

As the Examiner agrees, Parks does not irradiate a resist pattern with light after etching a metal film, as recited in claims 1 and 3. The Examiner relies on Ye to somehow show irradiating a resist pattern with light after etching a metal film and removing of the resist pattern using a resist stripper that dissolves and removes the resist pattern. However, in Ye, the photoresist pattern 28 is not removed using a resist stripper. Rather, in Ye, the photoresist pattern 28 is removed with a combination of a UV laser 111 and an acid bath. See Ye at col. 6, line 62 to col. 7, line 3. One of ordinary skill in the art would not have been motivated to modify Parks to include the laser and acid bath step of Ye because any such modification would change the principle of operation of Parks, which merely uses plasma ashing to remove a resist. See Parks at col. 2, line 58 to col. 3, line 8. There is nothing in the cited art that would suggest that a resist pattern of Parks should be irradiated with a laser in combination with an acid bath to remove a resist pattern in Parks. The Examiner points to col. 4, lines 33 and 34 and col. 6, lines 25 and 26 of Ye to somehow provide such motivation. These passages explain that the wet bath/UV laser photoresist removal effect is "superior to conventional photoresist strip processes at removing polymers over photoresist layers." However, Parks' method would not obtain such a benefit since Parks provides no indication that polymers over the resist layer are to be removed.

For at least these reasons, claims 1 and 3 are allowable over Parks and Ye. Dependent claims 10, 20, 22, 24, and 26 are allowable for at least the reasons that claims 1 and 3 are allowable.

Applicant requests withdrawal of the rejection of claims 2 and 4 because Parks and Ye fail to describe or suggest irradiating a residue of the resist pattern with a light after removing the resist pattern, and removing the residue of the resist pattern by using a developer, as recited in claims 2 and 4, and because one of ordinary skill in the art would not have been motivated to modify Parks in the manner set forth in the rejection.

As the Examiner agrees, Parks does not describe irradiation of a residue of a resist pattern with a light after removing the resist pattern and removing the residue of the resist pattern using a developer. Moreover, while Ye mentions that a UV laser in combination with an acid bath is used to remove the photoresist pattern 28, Ye fails to describe or suggest that the UV laser irradiates a residue of the photoresist pattern 28 after removing the photoresist pattern and removing the residue of the resist pattern using a developer.

For at least these reasons, claims 2 and 4 are allowable over Parks and Ye. Dependent claims 9, 11, 21, 23, 25, and 27 depend from claims 2 and 4 and are allowable for at least the reasons that claims 2 and 4 are allowable.

Claims 5-8 have been rejected as being unpatentable over Parks in view of Ye and U.S. Patent No. 6,645,851 (Ho). Claims 5-8 depend, respectively, from claims 1-4, which were rejected as being unpatentable over Parks in view of Ye. Ho does not remedy the failure of Parks to describe or suggest the subject matter of claims 1-4. In Ho, a photoresist layer 14 is "blanket exposed without a patterned mask and is then developed in an aqueous base solution to remove all photoresist 14 above dielectric layer 12." However, Ho never describes or suggests irradiating a resist pattern, as recited in claims 1 and 3, or irradiating a residue of a resist pattern, as recited in claims 2 and 4. For at least these reasons, claims 1-4, and dependent claims 5-8, are allowable over any proper combination of Parks, Ye, and Ho.

Claims 17 and 18 have been rejected as being unpatentable over Parks in view of Ye and U.S. Patent No. 4,816,115 (Horner). Claims 17 and 18 depend, respectively, from claims 3 and

4, which were rejected as being unpatentable over Parks in view of Ye. Horner does not remedy the failure of Parks and Ye to describe or suggest the subject matter of claims 3 and 4. In Horner, while a photoresist layer 9 is exposed with radiation, as described at col. 7, lines 30-52, there is no description of irradiation of a resist pattern, as recited in claim 3, or irradiation of a residue of a resist pattern, as recited in claim 4. For at least these reasons, claims 3 and 4, and dependent claims 17 and 18, are allowable over any proper combination of Park, Ye, and Horner.

New claims 28-35 depend from the independent claims, and are allowable for at least the reasons that the independent claims are allowable.

In conclusion, applicant submits that the claims are in condition for allowance. The fee in the amount of \$520 for payment of excess claim fees (\$400) and the one month extension of time (\$120) is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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